RICHARDSHI
Software Developer

CONTACT
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github.com/richard-shi 🎧

SKILLS

Highly Proficient
Java, C, Python, Swift, Javascript

Proficient
C++, Bash, Objective-C
Postgres, Redis, Cassandra
ARM Assembly, VHDL
LaTeX

EDUCATION

Candidate for BASc in Computer Engineering
University of Waterloo
Expected 2020

CERTIFICATES

Oracle Certified Associate, Java SE 7 Programmer
Summer 2015

INTERESTS

World History
Former President of high school Model United Nations Club; Actively organized lectures and mock debates for 30+ students for regional competitions

Swimming
Strategy Games
Mechanical Keyboards

WORK EXPERIENCE

Hubdoc
Sept 2017–Dec 2017
Software Engineer
- Created and optimized **hundreds** of **Node** microservices in a small team to automate financial data aggregation for accountants, earning **$300,000+** in monthly revenue.
- Designed and upgraded a responsive data visualization dashboard with **Express**, **Backbone** and **PostgreSQL** for enabling advanced **analytics solutions**
- Improved microservice fetch success rate from **58% to 80%**

Rave Media
Jan 2017–Apr 2017
iOS Software Engineer
- Built a novel asynchronous networking layer for the Rave social video app in **Swift**, reducing request latency by **14%**
- Worked in a small team to add **Rakuten** and **Netflix** support to the app
- Redesigned and optimized memory management of the app, reducing usage by **73%**
- Implemented new build system to cut build times by **84%** and enable Swift frameworks

Blackberry
May 2016–Aug 2016
Software Engineer - Camera Firmware
- Developed Android OS Camera enhancements in **C++** including a dynamic performance adjuster, enabling **3X video resolution increase** at minimal performance loss
- Optimized Android camera drivers for the Blackberry **Priv**, **DTEK50** and **DTEK60**

PERSONAL PROJECTS

ReactionBot.js
reactionbot-js.herokuapp.com
Node.js, Heroku, Express, PostgresSQL, Slack API, BotKit API, Dashbot API, WebSockets
- Created a chatbot for Slack that allows users to share images and memes with more than **30 engaged teams** since release
- Uses the Slack API with **WebSockets** on **Express** and **Postgres**

ESPower
git.io/vNVFh
ESP8266 API, MicroPython, Python 3
- Developed an IoT power bar exposed through a REST API using **Micropython** on the **ESP8266** microcontroller

Blockchain.js
git.io/chainjs
Node.js, Express.js
- Designed a Blockchain implementation in **Node.js** with a Bitcoin-style Proof of Work algorithm and over-the-network chain distribution with **Express**

Path Polo - Hack the North 2016
git.io/v9wlz
Android API, Java, Pebble API, Google Maps API
- Built an Android/Pebble watch app to guide the visually impaired using haptic feedback
- Directed users to locations chosen on Google Maps on phone or pebble app